

GP 1772 AF

TRANSMITTAL LETTER			Case No. 659/489
Serial No. 09/215,951	Filing Date December 18, 1998	Examiner A. Chevalier	Group Art Unit 1772
Inventor(s) Fell et al.			
Title of Invention Stretchable Composite Material Having Continuous Gathers			

TO THE COMMISSIONER FOR PATENTS

Transmitted herewith is Appellant's Brief.

- ☐ Small entity status of this application under 37 CFR § 1.27 has been established by verified statement previously submitted.
- ☐ A verified statement to establish small entity status under 37 CFR §§ 1.9 and 1.27 is enclosed.
- ☒ Petition for a three month extension of time and \$890 check.
- ☐ No additional fee is required.
- ☐ The fee has been calculated as shown below:

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	Claims Remaining After Amendment		Highest No. Previously Paid For	Present Extra
Total		Minus		
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First Presentation of Multiple Dep. Claim				

Small Entity

Rate	Add'l Fee
x \$9 =	
x 40 =	
+ \$135 =	
Total add'l fee	\$

or

Other Than  
Small Entity

Rate	Add'l Fee
x \$18 =	
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Total add'l fee	\$

- ☐ Please charge Deposit Account No. 23-1925 (BRINKS HOFER GILSON & LIONE) in the amount of \$\_\_\_\_\_. A duplicate copy of this sheet is enclosed.
- ☒ A check in the amount of \$310 to cover the filing fee is enclosed.
- ☒ The Commissioner is hereby authorized to charge payment of any additional filing fees required under 37 CFR § 1.16 and any patent application processing fees under 37 CFR § 1.17 associated with this communication or credit any overpayment to Deposit Account No. 23-1925. A duplicate copy of this sheet is enclosed.
- ☒ I hereby petition under 37 CFR § 1.136(a) for any extension of time required to ensure that this paper is timely filed. Please charge any associated fees which have not otherwise been paid to Deposit Account No. 23-1925. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on September 27, 2001.

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### **(1) REAL PARTY IN INTEREST**

The present application is owned by Kimberly-Clark Worldwide, Inc.

### **(2) RELATED APPEALS AND INTERFERENCES**

There are no known appeals or interferences which will directly affect or be directly affected by or have a bearing on this appeal.

### **(3) STATUS OF CLAIMS**

Claims 1-12, 14-18, and 48-50 are pending herein, and all are appealed.

### **(4) STATUS OF AMENDMENTS**

The claims were rejected in a Final Office Action, mailed December 15, 2001 [Paper No. 11]. A Request for Reconsideration was filed on February 15, 2001 [Paper No. 12] after Final Rejection. The Advisory Action of March 2, 2001 [Paper No. 13], indicates that this Request for Reconsideration was not entered. The claims are presented in the form as finally rejected.

### **(5) SUMMARY OF INVENTION**

In an embodiment of the invention, there is provided a stretchable composite material comprising a first layer and a second layer (p. 4, line 3; Figure 1A); a plurality of elongated elastic members located between the first and second layers and being in contact with the first and second layers (p. 4, lines 4 and 19-29); and regions of securement securing the elastic members, first and second layers (p. 5, lines 7-26, Figures 21 and 22). The composite has a maximum elongation of at least about 85% of the elongation of an elastic member (p. 7, lines 6-10).

In another embodiment of the invention, there is provided a stretchable composite material comprising a first layer and a second layer made of a breathable material (p. 4, line 14); at least two elastic members positioned in between the first and second layers (p. 4, lines 4 and 19-29; Figure 1A); and regions of securement securing the elastic members, first layer, and the second layer and comprising attached zones which extend transverse and across a majority of the elastic members (p. 6, lines 14-21; p. 18, lines 14-20; Figures 23 and 24).

## **(6) ISSUE**

- 1. Whether Claims 1-12, 14-18, and 48-50 are anticipated under 35 USC 102(b) by U.S. Patent No. 5,098,423 to Pieniak.**
- 2. Whether Claims 1-12, 14-18, and 48-50 are anticipated under 35 USC 102(b) by U.S. Patent No. 6,056,733 to Kielpikowski.**

## **(7) GROUPING OF CLAIMS**

The claims are in three groups which do not stand or fall together. Group I includes claims 1-12 and 14-17, Group II includes claim 18, and Group III includes claims 48-50.

## **(8) ARGUMENT**

### **1. Description of the invention**

Appellants have developed a stretchable composite material which includes elastic members situated between two layers and attached to the layers at various points through regions of securement. The orientation of the elastic materials and of the regions of securement coordinate to provide a composite material which has increased maximum elongation, expressed as the elongation of the composite as a percentage of the elongation of the elastic members. Composites of the present invention provide for a maximum elongation of at least about 85%. The composite materials may further have a structure which includes regions of securement, zones of attachment, and/or zones of unattachment.

Claims 1-12 and 14-17 are distinct from claim 18 and from claims 48-50 since each group contains claim elements not found in the other group. For example, claims 1-12 and 14-17 require the composite to have a maximum elongation above a certain value. Claims 48-50, however, require the first and second layers to be breathable materials and further require the regions of securement to include attached and unattached zones having certain topographies. Claim 18 requires the composite to have both a maximum elongation above a certain value as well as zones of attachment.

**2. Claims 1-12, 14-18, and 48-50 are not anticipated by Pieniak.**

The examiner has rejected claims 1-12, 14-18 and 48-50 as anticipated by Pieniak U.S. Patent No. 5,098,423. Specifically, at page three of the Office Action dated December 15, 2000 [Paper #11] the examiner asserts that:

The elastic members [of Pieniak] have an extensibility to rupture of at least about 150% and a recovery at 50% elongation of at least 50%, which clearly may include composites having a maximum elongation of at least 85%, 90%, and 95%.

It appears that the examiner bases the above assertion on column 6, lines 28-32 of Pieniak, which provide:

The elastic members have an extensibility to rupture of at least about 150 percent, and a recovery at 50 percent elongation of at least about 50 percent, and preferably at least about 75 percent.

As to Groups I and II, Pieniak does not disclose or suggest the claim element requiring a maximum elongation of at least about 85% of the elongation of an elastic member. The teaching of Pieniak relied upon by the examiner is far removed from this claim element and in fact supports the patentability of appellants' claimed invention. The teachings of appellants' specification, address and distinguish prior art such as Pieniak, to the extent that Pieniak relates to patentability at all. In particular the appellants' specification provides that:

For example, a panel made using 1/8 inch (3.2 mm) securement regions, spaced apart by 1/8 inch (3.2 mm) and **having the elastic strands placed in under 250% elongation will have a maximum elongation length of about 240%. Thus, this composite would have a maximum elongation of about 96% of the elongation of the elastic material. Under the same conditions, it would be expected that a composite made by conventional techniques would have a maximum elongation length of about 212%. This conventional material would have a maximum elongation of about 84.8% of the elongation of the elastic member.** Thus, the elastic composites of the present invention allow for a much greater use of the elongation put into the strands and provide for a material that for the same initial elongation can have a substantially larger maximum elongation. For example, the composite material of the present invention has an elongation of at least about 85% of the elongation of the elastic material, ideally at least about 90% of the elongation of the elastic material, and optimally at least about 95% of the elongation of the elastic material. [page 6 line 27 to page 7 line 10 (emphasis added)]

The disclosure of Pieniak does not teach or suggest a composite having a maximum elongation of at least about 85% of the elongation of an elastic member. Pieniak does not address the relationship between the elongation of elastic members when a composite is made and the overall ability, or capacity, of that composite to elongate after it is made. To the contrary, the section of Pieniak that the examiner relies upon focuses on "percent retraction," which Pieniak defines as being based on the "length of sample measured three seconds after released from extended length." (Pieniak, col. 6, lines 17, & 22-23) "Percent retraction" has no relation to appellants' "percent maximum elongation." The substantial differences between these two can be illustrated by a comparison of the teachings of Pieniak with that of the present specification.

Pieniak's Teachings (col. 6, lines 15-32)	Teachings of the present specification
<p>At 75 "percent retraction"</p> <p><math>L_o = 100</math> (original length of sample)</p> <p><math>L_e = 150</math> (fully extended length)</p> <p><math>L_t = 112.5</math> (length of sample measured three seconds after release from extended length)</p> <p><math>75 = 100 \times [(150 - L_t) / (150 - 100)]</math>  <math>0.75 = (150 - L_t) / 50</math>  <math>37.5 = 150 - L_t</math>  <math>L_t + 37.5 = 150</math>  <math>L_t = 112.5</math></p>	<p><math>L_{ee} = 350</math> (elongation of elastics prior to placement in composite)</p> <p><math>L_{er} = 100</math> (length of elastics in relaxed state prior to elongation for placement in composite structure)</p> <p><math>L_{me} = 297.5</math> (maximum elongation of composite structure)</p> <p>Percent Maximum Elongation =  <math>(L_{me} \div L_{ee}) \times 100</math></p> <p>Thus, in the example of the specification, set out herein, the composite would have a maximum elongation of 85%</p> <p>* The claim term at issue is "a maximum elongation of at least about 85%"</p>

As can be seen from this comparison, Pieniak's teachings have no relationship or bearing on appellants. Pieniak's teachings with respect to "percent retraction" have no bearing on, or relationship to, appellants' claimed percentage maximum elongation. As set forth above, these two features look to entirely different properties of the composites. Pieniak looks to the behavior of the structure three seconds after it is released from tension. On the other hand, appellants look to the relationship between the elastic elements being placed in the structure and that structure's maximum elongation.

Thus, Pieniak's teachings and appellants' claimed invention are not identical or substantially identical in structure or composition, and are not produced by identical or substantially identical processes as asserted by the examiner. To the contrary, Pieniak and appellants are at the opposite ends of the spectrum – Pieniak looks to retraction – appellants look to elongation. Accordingly, it is respectfully submitted that Pieniak does not provide the *prima facie* showing that would render appellants' claimed invention unpatentable under the legal doctrine set forth in *In re Spada*, 911 F.2d 705, 709, 15 U.S.P.Q.2d 1655, 1658 (Fed. Cir. 1990).

It is further noted, especially regarding the claims in Group II and Group III, that Pieniak does not disclose or suggest zones of attachment. In fact, Pieniak is silent as to any pattern that is used for the application of adhesive to secure the elastics (see, e.g. Pieniak col. 6, lines 39-40, and col. 7, lines 6-10). Inasmuch as each and every element of a claim must be found in a single prior art reference to show anticipation, the appellants' claimed invention is not anticipated by Pieniak.

### **3. Claims 1-12, 14-18, and 48-50 are not anticipated by Kielpikowski.**

The examiner has also rejected claims 1-12, 14-18 and 48-50 as anticipated by Kielpikowski U.S. Patent No. 6,056,733. Specifically, on page three of the Office Action dated December 15, 2000 [Paper #11] the examiner asserts that:

The elastomeric thread [of Kielpikowski] comprises any elastomeric material capable of being at least about 50%, desirably about 350% and capable of recovering to within at least 250%, desirably about 150% of its original length after being elongated about 300%.

It appears that the examiner is relying up the following provision of Kielpikowski:

As representatively illustrated in FIGS. 1-3, the barrier layer 20 is stitched with a single elastomeric thread 22 adjacent the distal edge 14 of the containment flap 10. Alternatively, the barrier layer 20 may be **stitched** with from about 2 to about 10 elastomeric threads. Multiple elastomeric threads may be configured in a laterally spaced, generally parallel arrangement. Suitably, the elastomeric thread 22 or threads are configured parallel to the distal edge 14 of the containment flap 10 and are located within about one inch (25 mm) of the distal edge 14.

The elastomeric thread 22 suitably comprises any elastomeric material capable of being elongated at least about 50 percent, desirably about 350 percent, and capable of recovering to within at least about 250 percent, desirably about 150 percent of its original length after being elongated about 300 percent. In one specific embodiment, the elastomeric thread can, for example, be composed of a spandex elastomeric thread such as, for example, a 470 decitex LYCRA thread commercially available from E.I. Dupont de Nemours and Co. Alternatively, the elastomeric thread 22 can be composed of a thermoplastic elastomer or a natural or synthetic rubber commercially available from J.P.S. Elastomerics Corp. The elastomeric thread 22 can also be composed of a heat activatable elastic material such as PEBAX, commercially available from Atochem, Inc., which can be activated with heat treatment after the barrier layer 20 is stitched with the thread 22.

In a specific embodiment of the present invention, the barrier layer 20, as representatively illustrated in FIGS. 1-3, can be **stitched with an elastomeric thread 22** substantially along the entire length 18 of the containment flap 10. Alternatively, the barrier layer 20 can be stitched with the elastomeric thread 22 along a portion of the length 18 of the containment flap 10. For example, the barrier layer 20 may be stitched along at least about 60 percent of the length 18 of the containment flap 10. The ends of the elastomeric thread can be attached to the barrier layer by any method known to those skilled in the art such as thermal bonding, adhesive bonding, ultrasonic bonding, knotting or the like. Alternatively, the ends of the elastomeric thread may be contained when the barrier layer is attached to an absorbent article. [col. 4 line 53 to col. 5 line 27 (emphasis added)]

This teaching of Kielpikowski is even further removed from appellants' claimed invention than is Pieniak.

First, this teaching from Kielpikowski is directed to the use of an elastic thread to **stitch materials together**. Using thread to stitch two materials together is substantially different from appellants' claimed invention. On this basis alone, it is respectfully submitted that the examiner's assertion that the above provision of Kielpikowski is



identical in structure or composition, or is produced by identical or substantially identical processes to appellants' claimed invention cannot be maintained.

Moreover, Kielpikowski's teaching with respect to its sewing thread is limited to how the thread, by itself, can be stretched and relaxed. It does not appear that Kielpikowski provides any teaching or suggestion about the relationship of an elongated thread to the maximum elongation of an ultimate product. As such, Kielpikowski provides no teaching or suggestion that even remotely relates to appellants' claimed percentage maximum elongation, which is required by the claims of Groups I and II.

Thus, Kielpikowski's teachings and appellants' claimed invention are not identical or substantially identical in structure or composition, and are not produced by identical or substantially identical processes as asserted by the examiner. To the contrary, Kielpikowski and appellants are unrelated – Kielpikowski looks to how its sewing thread performs before being stitched into a completed structure – appellants look to how the condition of its elastic elements at the time of manufacture relate to the maximum elongation of the completed structure. Accordingly, it is respectfully submitted that Kielpikowski does not provide the *prima facie* showing that would render appellants' claimed invention unpatentable under the legal doctrine set forth in *In re Spada*, 911 F.2d 705, 709, 15 U.S.P.Q.2d 1655, 1658 (Fed. Cir. 1990).


It is further noted, especially regarding the claims in Group II and Group III, that Kielpikowski does not disclose or suggest zones of attachment. Inasmuch as each and every element of a claim must be found in a single prior art reference to show anticipation, the appellants' claimed invention is not anticipated by Kielpikowski.

#### **4. Conclusion**

It is respectfully submitted that neither Pieniak nor Kielpikowski provide the *prima facie* showing that would render appellants' claimed invention unpatentable under the legal doctrine set forth in *In re Spada*, 911 F.2d 705, 709, 15 U.S.P.Q.2d 1655, 1658 (Fed. Cir. 1990). The teachings of appellants' claimed invention and the teachings of the cited references are not identical or substantially identical in structure or composition, and are not produced by identical or substantially identical processes. The cited references further do not teach the structure which is present in appellants' claims,

thus failing to teach each and every element of those claims. Appellants submit that the present invention is fully patentable over the cited references and thus, the Examiner's rejection should be REVERSED.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'G. P. Belvis', written over a horizontal line.

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## APPENDIX

Claims 1-12, 14-18, and 48-50 are pending.

1. A stretchable composite material comprising:
  - a) a first layer;
  - b) a second layer;
  - c) a plurality of elongated elastic members;
  - d) the elastic members located between the first and second layers and being in contact with the first and second layers;
  - e) regions of securement securing the elastic members, first and second layers; and
  - f) the composite having a maximum elongation of at least about 85% of the elongation of an elastic member.
2. The composite material of claim 1 in which the elastic members are slightly out of parallel.
3. The composite material of claim 1 in which the elastic members are roughly parallel.
4. The composite material of claim 1 in which the plurality of elastic members is comprised of a single strand.
5. The composite material of claim 1 in which the regions of securement are approximately the same size and are spaced approximately equally apart from each other.
6. The composite material of 1 in which the maximum elongation of the composite is at least about 90% of the elongation of an elastic member.

7. The elastic composite material of claim 1 in which the maximum elongation of the composite is at least about 95% of the elongation of an elastic member.
8. The composite material of claim 1 comprising at least one stiffened edge.
9. The composite material of claim 1 wherein the first layer comprises a breathable material.
10. The composite material of claim 1 wherein the first layer comprises a non-breathable material.
11. The composite material of claim 10 wherein the second layer comprises a breathable material.
12. The composite material of claim 10 wherein the second layer comprises a non-breathable material.
14. The composite material of claims 1, 9, or 10 wherein the first layer comprises a water impervious material.
15. The composite material of claims 1, 9, or 10 wherein the first layer comprises a water pervious material.
16. The composite material of claims 1, 11, or 12 wherein the second layer comprises a water impervious material.
17. The composite material of claims 1, 11, or 12 wherein the second layer comprises a water pervious material.
18. The composite material of claim 1 comprising zones of attachment.
48. A stretchable composite material comprising: a first layer, the first layer being a breathable material; a second layer, the second layer being a breathable material; at least two elastic members, the elastic members positioned in between the

first and second layers; regions of securement securing the elastic members, the first layer and the second layer; the regions of securement further comprising attached zones and unattached zones; the attached zones extending traverse and across a majority of the elastic members.

49. The composite material of claim 48 further comprising a stiffened edge.

50. An article of apparel comprising the composite material of claims 1 or 48.